

WHAT IS CLAIMED IS:

1. A method for providing a visual cue for placing a first geometric entity in a three-dimensional space represented in a computer-implemented graphics program, comprising:

5 (a) displaying a two-dimensional viewport of the three-dimensional space on a display device attached to a computer;

(b) selecting a first point in the two-dimensional viewport;

(c) based on the first point, displaying a visual cue in the two-dimensional viewport that indicates a coordinate system plane within the three-dimensional space, wherein the coordinate system plane identifies a plane where the first geometric entity is to be placed;

(d) using the visual cue, selecting a second point on the coordinate system plane in the two-dimensional viewport; and

(e) placing the first geometric entity on the coordinate system plane based on the second point.

2. The method of claim 1 wherein the visual cue comprises a second geometric entity.

20 3. The method of claim 2 wherein the second geometric entity comprises a circle in the three-dimensional space oriented on the coordinate system plane displayed in the two-dimensional viewport.

4. The method of claim 2 wherein:
the second geometric entity comprises an ellipse displayed in the two-
dimensional viewport; and
a center of the ellipse is displayed on the first point.

5. The method of claim 2 wherein tick marks are displayed on the
geometric entity.

6. The method of claim 5 wherein a distance between two tick marks may
be specified.

7. The method of claim 1 further comprising displaying a temporary
representation of the first geometric entity originating at the first point and ending at a
cursor location, wherein:
the temporary version represents where the first geometric entity is to be placed;
the second point is selected at the cursor location.

8. The method of claim 1 wherein the orientation of the first geometric
entity snaps to a particular angle from the first point.

9. The method of claim 8 wherein the visual cue displays the numeric
degree of the particular angle.

10. The method of claim 8 wherein the visual cue indicates available angles for the orientation of the first geometric entity.

5 11. The method of claim 1 wherein an increment value for snap angles may be specified.

12. The method of claim 1 wherein the particular angle may be specified by a user.

10 13. An computer-implemented graphics system for providing a visual cue for placing a first geometric entity in a three-dimensional space, comprising:

(a) a computer having a display device attached thereto;

(b) means, performed by the computer, for displaying a two-dimensional viewport of the three-dimensional space on the display device;

15 (c) means, performed by the computer, for selecting a first point in the two-dimensional viewport;

(d) means, performed by the computer, for displaying, based on the first point, a visual cue in the two-dimensional viewport that indicates a coordinate system plane within the three-dimensional space, wherein the coordinate system plane identifies

20 a plane where the first geometric entity is to be placed;

(e) means, performed by the computer, for selecting, using the visual cue, a second point on the coordinate system plane in the two-dimensional viewport; and

(f) means, performed by the computer, for placing the first geometric entity

on the coordinate system plane based on the second point.

14. The system of claim 13 wherein the visual cue comprises a second geometric entity.

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15. The system of claim 14 wherein the second geometric entity comprises a circle in the three-dimensional space oriented on the coordinate system plane displayed in the two-dimensional viewport.

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16. The system of claim 14 wherein:
the second geometric entity comprises an ellipse displayed in the two-dimensional viewport; and
a center of the ellipse is displayed on the first point.

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17. The system of claim 14 wherein tick marks are displayed on the geometric entity.

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18. The system of claim 17 wherein a distance between two tick marks may be specified.

19. The system of claim 13 further comprising means, performed by the computer, for displaying a temporary representation of the first geometric entity originating at the first point and ending at a cursor location, wherein:

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the temporary version represents where the first geometric entity is to be placed;
the second point is selected at the cursor location.

20. The system of claim 13 wherein the orientation of the first geometric
5 entity snaps to a particular angle from the first point.

21. The system of claim 20 wherein the visual cue displays the numeric
degree of the particular angle.

22. The system of claim 20 wherein the visual cue indicates available angles
10 for the orientation of the first geometric entity.

23. The system of claim 13 wherein an increment value for snap angles may
be specified.

24. The system of claim 13 wherein the particular angle may be specified by a
15 user.

25. An article of manufacture embodying logic for performing a method for
20 providing a visual cue for placing a first geometric entity in a three-dimensional space
represented in a computer-implemented graphics system, the method comprising:

(a) displaying a two-dimensional viewport of the three-dimensional space on
a display device attached to a computer;

- (b) selecting a first point in the two-dimensional viewport;
- (c) based on the first point, displaying a visual cue in the two-dimensional viewport that indicates a coordinate system plane within the three-dimensional space, wherein the coordinate system plane identifies a plane where the first geometric entity is to be placed;
- (d) using the visual cue, selecting a second point on the coordinate system plane in the two-dimensional viewport; and
- (e) placing the first geometric entity on the coordinate system plane based on the second point.

26. The article of manufacture of claim 25 wherein the visual cue comprises a second geometric entity.

27. The article of manufacture of claim 26 wherein the second geometric entity comprises a circle in the three-dimensional space oriented on the coordinate system plane displayed in the two-dimensional viewport.

28. The article of manufacture of claim 26 wherein:

the second geometric entity comprises an ellipse displayed in the two-dimensional viewport; and

a center of the ellipse is displayed on the first point.

29. The article of manufacture of claim 26 wherein tick marks are displayed

on the geometric entity.

30. The article of manufacture of claim 29 wherein a distance between two tick marks may be specified.

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31. The article of manufacture of claim 25, the method further comprising displaying a temporary representation of the first geometric entity originating at the first point and ending at a cursor location, wherein:

the temporary version represents where the first geometric entity is to be placed;

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the second point is selected at the cursor location.

32. The article of manufacture of claim 25 wherein the orientation of the first geometric entity snaps to a particular angle from the first point.

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33. The article of manufacture of claim 32 wherein the visual cue displays the numeric degree of the particular angle.

34. The article of manufacture of claim 32 wherein the visual cue indicates available angles for the orientation of the first geometric entity.

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35. The article of manufacture of claim 25 wherein an increment value for snap angles may be specified.

36. The article of manufacture of claim 25 wherein the particular angle may be specified by a user.

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